

NOTES ON AUSTRALIAN DIPTERA. XXXVII.

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(Fifteen Text-figures.)

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In this paper I present a report on the remainder of the family Chloropidae that have been in my hands for several years to complete, as far as is now possible, data on the group for Australia. Previously 107 species were known. Probably the number now listed is only a small part of those actually occurring in Australia, as the flies are small, rarely exceeding 3 millimetres in length, and some of the genera are not readily found in general collecting.

The family is divided into two subfamilies on the basis of the wing venation, Chloropinae having the costal vein discontinued at or shortly beyond the apex of the third vein, and Oscinosominae having it continued to the apex of the fourth vein. In most genera of Chloropinae there is no sensory area on the dorsal surface of the hind tibia, and in the great majority of the genera there is such an area on part of the posterodorsal surface that usually consists of a flattened or depressed elongate oval area normally furnished with dense microscopic pile, and frequently showing darker or lighter than the remainder of the tibia.

The genera in many cases are difficult to separate, rather trivial characters having been used in the past in many cases. I have attempted to discover characters that appear to be of more significance and that are more readily appreciable; the result has been that in numerous cases generic concepts have been changed. In all cases I have used the genotype as a standard for judging the relationships and have based my generic concepts almost exclusively upon the more outstanding character or characters of such genotypes. The classification herein presented will be found applicable to those genera included, wherever they occur, as, in my work, I have carefully compared species of the concepts from all faunal regions. It is, however, worth noting that a thorough revision of the family is essential to a complete understanding of all the genera and their distribution.

Subfamily CHLOROPINAE.

Key to the Genera.

1. Mesopleura haired on posterior half or less 2
 Mesopleura bare 4
2. Hind tibia without an elongate-oval sensory area on the posterodorsal surface near middle; arista strap-like, apical or preapical on the third antennal segment *Pachylophus* Loew
 Hind tibia with an elongate-oval sensory area on the hind tibia near middle of the posterodorsal surface; arista slender, hair-like 3
3. Frontal triangle large, elongate triangular, and glossy; outer cross-vein of the wing at much more than its own length from apex of the fifth vein, the penultimate section of third vein never longer than the penultimate section of fourth vein *Chloropisca* Loew

- Frontal triangle not defined, represented by a linear shiny extension from ocelli to, or nearly to, anterior margin of frons; outer cross-vein of the wing usually at about its own length from apex of fifth vein, the penultimate section of third vein always longer than the penultimate section of fourth vein *Pemphigonotus* Lamb
4. Hind tibia with an elongate-oval sensory area near middle of the posterodorsal surface 5
 Hind tibia without a sensory area near middle of the posterodorsal surface 7
5. Gena about one-third as high as eye; frontal triangle about two-thirds as long as frons *Pseudoformosina*, n. gen. 6
 Gena much less than one-third as high as eye 6
6. Frontal triangle continued rather widely to anterior margin of frons, bare; apical scutellar bristles situated on lower edge *Formosina* Becker
 Frontal triangle, if continued to anterior margin of frons, only narrowly so, and in such cases with hairs invading the surface laterally; scutellar bristles situated on upper edge ¹*Chloropisca* Loew, part
7. Cross-veins of the wing exceptionally closely placed, separated by about the length of the outer one (Fig. 1) *Diplotoxa* Loew
 Cross-veins of the wing always separated by distinctly more than the length of the outer one 8
8. Mesonotum with a pair of well-developed dorsocentral bristles at or in front of the suture *Chloropella* Malloch
 Mesonotum with at most only the prescutellar pair of dorsocentral bristles 9
9. Hind femur thicker than mid pair and with either an anteroventral and posteroventral series of minute black spines on apical half or at least one series of minute spines on the apical half of the posteroventral surface, the lines on which they are situated slightly elevated; hind tibia usually more or less bent and with a slender linear ridge on the basal half or less of the ventral surface *Chloromerus* Becker
 Hind femur not appreciably thicker than the other pairs and without ventral armature as described above; hind tibia straight or almost so, never with a ventral linear ridge basally 10
10. Vibrissal angle sharp, slightly produced; proboscis more slender than usual and geniculated (Fig. 11) *Melanum* Becker
 Vibrissal angle not produced, usually rounded; proboscis stout 11
11. Third antennal segment distinctly longer than wide, angulate at upper apex; aristae black; thorax black *Assuania* Becker
 Third antennal segment not longer than wide nor angulate above at apex, or, if so, the aristae are white and the thorax is yellow with black markings 12
12. Thorax yellow, with black markings on dorsum; halteres yellow .. ²*Oscinis* Latreille
 Thoracic dorsum black; halteres black ²*Chloropsina* Becker
- N.B.*—Several genera are not included in this paper, having been previously dealt with in this series. I figure the wing of *Diplotoxa tasmaniensis* Malloch as it has not been figured by me before (Fig. 1).

CHLOROMERUS Becker.

Ann. Mus. Nat. Hung., ix, 1911, 40; Malloch, *Proc. Linn. Soc. N.S.W.*, xlix, 1924, 332.

I present below a key to the species of this genus known to me now, my previously published key being incomplete.

Key to the Species.

1. Hind femur at least three times as thick as mid one, minutely black dentate on apical third or more of the anteroventral and posteroventral surfaces 2
 Hind femur not more than twice as thick as the mid one, with very minute black teeth on the apical third or more of the posteroventral surface only 8

¹ This section is included to include two Australian species that may have the mesopleura bare, my material failing to show the character clearly.

² The distinctions between these two genera are not very clear, and at this time I have not any representative of *Chloropsina* for careful comparative study.

2. All femora quite conspicuously marked with black 3
Femora entirely yellow or only the fore and mid pairs with a faint brownish or blackish mark at middle 4
3. Femora almost entirely black, glossy; mesonotal vittae and pleural spots entirely black; prelabrum fuscous *nigrifemur* Malloch
Femora yellow, with a black mark on dorsum of each at middle; mesonotal vittae largely red, central one with a pair of small black spots on posterior extremity, submedian pair each with a black mark on outer side in front of suture and the posterior half black, sublateral pair black, postsutural; sternopleural mark red, black on upper edge; prelabrum yellow *maculifemur* Malloch
4. Frontal triangle yellow, only the ocellar spot black; mesopleura, sternopleura, and hypopleura each with a black mark 5
Frontal triangle yellow, with ocellar spot and lateral margins black or brown; pleura usually with five black marks (*purus* Becker) 6
5. Prelabrum yellow; mesonotum with three glossy-black vittae due to the fusion of the submedian and sublateral vittae behind the suture *pallidior* Becker
Prelabrum partly black; mesonotum with the usual five glossy black vittae *trimaculata* Malloch
6. Mesonotal vittae largely red, only posterior extremities and sometimes the sublateral pair on outer edges presuturally black *purus*, v. *varians* Malloch
Mesonotal vittae largely or entirely glossy-black 7
7. Mesonotal vittae entirely glossy-black; fore and mid femora each with a faint black mark on ventral surface at middle *purus*, v. *maculifer* Malloch
Mesonotal vittae glossy-black, the central one usually reddish near anterior extremity; fore and mid femora entirely yellow *purus*, v. *purus* Becker
8. Frontal triangle largely yellow, without a central sulcus and with a series of fine hairs on each side near the edges 9
Frontal triangle largely black, either with a deep wide central sulcus from ocelli to anterior extremity or without a sulcus, but in either case without a series of hairs along each side near the edges 10
9. Frontal triangle with only a black spot covering the ocelli; sternopleural spot largely or entirely red *gracilis* Malloch
Frontal triangle with a central black stripe from vertex to anterior extremity; sternopleural spot glossy-black *striatifrons* Becker
10. Frontal triangle not sulcate, with a black central streak from ocelli to anterior extremity; palpi largely black *scutellaris* Becker
Frontal triangle with a quite deep sulcus from ocelli to anterior extremity, tapered in front, blackened in the depression; palpi yellow *advena*, n. sp.

CHLOROMERUS GRACILIS Malloch.

PROC. LINN. SOC. N.S.W., lii, 1927, 432.

This species agrees fairly well with the description of *Chlorops albifrons* Walker, but the antennae are not fulvous, the third segment being almost entirely black. A comparison with Walker's type, if it is still in existence, will be necessary to determine the status of the species.

CHLOROMERUS ADVENA, n. sp.

♂, ♀.—Head testaceous yellow, the frons darker yellow, triangle shiny black, yellowish on each side of central line; antennae orange-yellow, third segment largely blackened above and apically; aristae black; prelabrum with an elongate black streak on each side; hairs and bristles black; palpi yellow. Frons at vertex nearly half the head-width, parallel-sided, a little longer than wide, the triangle about three-fifths of the frontal width at vertex, extending to anterior margin of frons, the sulcus broad and not very deep, some of the hairs on the extreme edges on anterior fourth; surface hairs on interfrontalia numerous, longest along eyes. Vertical bristles only moderately developed, longer than the subequal ocellar and postvertical pairs. Eyes a little higher than long; gena not as high as width of third antennal segment, the latter slightly longer than wide, with the upper apical corner slightly angulate; aristae subnude. Thorax glossy-yellow, with the

usual five black vittae, usually glossy. Hairs dark, inserted in slight punctures; notopleurals 1 + 2. Pleura usually with but three black marks, those on the pteropleura and under the prothoracic spiracle usually faint or lacking. Scutellum yellow, rather broadly blackened on each side, slightly flattened on disc, the apical pair of bristles much longer than the preapical pair. Legs yellow, all femora more or less darkened centrally, the hind pair and hind tibiae broadly blackened centrally. In the female before me the legs are not blackened. Wings hyaline, veins pale brown. Third and fourth veins rather widely divergent to apices. Halteres yellow. Abdomen yellow, dull blackish-brown on dorsum except at apex of fourth and fifth tergites. Length, 3 mm.

Type, male, and allotype, Adventure Bay, Tasm., 1.i.1922 (A. Tonnoir). Paratype, Myponga, S. Australia (A. H. Elston).

The allotype has the third antennal segment paler than in the male, the prelabrum yellow, and the dark marks on the pleura reddish and not black, while the mesonotal vittae are rather evidently brownish-grey-dusted. The occurrence at the same time and place and similarity in other characters causes me to consider that it belongs with the male despite these distinctions.

CHLOROPS Meigen.

Illig. Mag., ii, 1803, 278; Becker, *Ann. Mus. Nat. Hung.*, ix, 1911, 53.

A careful examination of the genotype, *laeta* Meigen from the Palearctic region, discloses the fact that the mesopleura has numerous stiff hairs on the posterior half of its surface, a character that is comparatively rare in this family and has been made the basis for the distinction of certain groups as genera, the great majority of the other genera having the mesopleura bare. I have found no other species previously placed in *Chlorops* that has this character, though there may be such species as yet unknown to me. If, therefore, we make a strict interpretation of the genus on the basis of the haired mesopleura, there are no Australian species that belong to *Chlorops*. There are many poorly-defined genera in the family and a critical examination of the species available to me that would fall within *Chlorops* as generally interpreted by authors today, leads me to believe that there are several groups involved that might with good reason be considered as entitled to generic segregation from *Chlorops* in the strict sense. There are, for instance, several species that have the third antennal segment distinctly longer than wide and more or less distinctly angulate at apex above, apparently forming a connecting link between the group with the third antennal segment broadly rounded at apex and not longer than wide and *Assuania* Becker. The genotypes of *Ectecephala* Macquart, and *Parectecephala* Becker, peculiarly enough, both have the mesopleura haired behind. Judging from material in a large number of species sent to me from Europe by Dr. O. Duda, the species with bare mesopleura should be referred to *Oscinis* Latreille, though this is contrary to the attitude of Becker who, in his monograph of the European species, restricted that genus to one species that is distinguished from all others in the subfamily by the peculiar forward curvature of the second vein below the apex of first vein, these two veins being coalescent or almost so at apex of first, and the second fusing or almost so with the costal vein for a short distance beyond apex of first. I have not the species referred to.

OSCINIS Latreille.

Hist. Nat. Ins. et Crust., xiv, 1804, 382.

I include the species keyed below in the genus *Oscinis*; those already described were placed in *Chlorops* by their describers.

Key to the Species.

1. Frontal triangle with a deep central sulcus from anterior ocellus to the linear apical part, or midway to anterior extremity, and a rather deep incised line along either lateral edge from vertex to near anterior extremity of the central sulcus; aristae yellow at bases, white apically; pleura with but one black spot, immediately below the prothoracic spiracle *stigmatella* Becker
 Frontal triangle either centrally sulcate or without such sulcus, but if sulcate never with a deeply-incised lateral marginal line behind and the apex drawn out into a long slender point; aristae usually dark; pleura never with a single black spot, or if so it is not the stigmatal one 2
2. Frontal triangle with a well-defined central longitudinal sulcus, usually rather wide behind and extending from anterior ocellus to, or almost to, the anterior extremity; ocellar bristles not markedly longer and stronger than the post-vertical pair 3
 Frontal triangle without a distinct deep central longitudinal sulcus or groove, sometimes sulcate or furrowed on sides 8
3. Frontal triangle with numerous fine furrows on sides in addition to the central sulcus 4
 Frontal triangle without lateral furrows 5
4. Prothoracic spiracle with a deep black spot on lower margin; femora marked with black *grossa* Malloch
 No black prothoracic spiracular spot; femora yellow *convergens*, n. sp.
5. Antennae, palpi, and legs, entirely orange-yellow; mesonotal vittae part black and part orange-red; penultimate sections of third and fourth veins equal in length, penultimate section of fourth vein as long as ultimate section of fifth and one-third as long as its own ultimate section, the ultimate section of fifth vein not more than one-third as long as fifth vein along discal cell *federata*, n. sp.
 Antennae and legs partly black or fuscous; mesonotal vittae unicolorous black; penultimate section of third vein distinctly shorter than that of fourth, and about one-fourth as long as ultimate section of fourth 6
6. Mesonotal vittae overlaid with greyish-brown dust, not highly glossy; palpi yellow or brownish-yellow, sometimes faintly darkened at apices 6a
 Mesonotal vittae glossy-black; palpi partly black or very dark brown 7
- 6a. Frontal triangle without hairs on sides, the long hairs situated on the dull inter-frontalis; mesopleura on posterior upper half with grey dust *blundelli*, n. sp.
 Frontal triangle with a series of stiff hairs situated in punctures along each lateral margin; mesopleura not dusted above *seriata*, n. sp.
7. Femora almost entirely, and hind tibiae largely black; frontal triangle about 1.5 times as long as its width at vertex *nublitalpalis* Malloch
 Femora yellow, or narrowly black centrally; frontal triangle nearly twice as long as its width at vertex *sulcata* Becker
8. Frontal triangle with one or more well-defined longitudinal furrows on each side clear of the lateral edges; palpi yellow 9
 Frontal triangle smooth, without distinct longitudinal furrows 11
9. Only one furrow on each side of triangle, the apex of the latter with a short raised line; a single short hair on disc of the pteropleura in the type; third antennal segment largely yellow *impressa*, n. sp.
 Several furrows on each side of the triangle; pteropleura bare 10
10. Third antennal segment and aristae black; frontal furrows very fine, mostly incomplete, not curving round and connecting in front of ocelli *elstoni*, n. sp.
 Third antennal segment largely yellow; aristae with basal two segments yellow, third white; frontal furrows deep and entire, the innermost one or two curving round and connecting in front of ocelli *canaliculata* Becker
11. Aristae white on entire third segment, yellow or brown on basal two 12
 Aristae black or dark brown, the third segment sometimes paler basally 13
12. Base of aristae yellow; gena at middle not half as high as width of third antennal segment, the latter about 1.25 times as long as wide and quite definitely angled at apex above; frons dull laterad of the triangle; mesonotal vittae black, slightly shiny, overlaid with brown dust, five in number behind suture *pallidiseta* Malloch
 Base of aristae fuscous; frons shiny on at least the upper half between the triangle and eyes where it is microscopically longitudinally striate; gena as high as width of third antennal segment at middle; mesonotum with three broad glossy-black vittae, the short sublaterals behind suture fused with the submedian pair *variseta*, n. sp.

13. Ocellar bristles exceptionally well developed for this group, twice as long as the postverticals; mesonotal vittae slightly shiny, brownish-dusted; distance between apices of veins 3 and 4 measured round the costa about as long as the preceding section of the costa *ocellaris*, n. sp.
 Ocellar bristles not, or very slightly, longer than the postvertical pair; other characters not as above in combination 14
14. Palpi largely black; femora almost entirely black 15
 Palpi yellow; femora largely or entirely so 16
15. Third antennal segment wider than long, broadly rounded at apex; fourth vein rather distinctly arched beyond the outer cross-vein; third vein nearly straight; penultimate section of fourth vein hardly shorter than ultimate section of fifth; frontal triangle with one or two short irregular impressed lines on each side posteriorly, but no definite furrows *subarcuata*, n. sp.
 Third antennal segment a little longer than wide, more narrowly rounded at apex; fourth vein not arched beyond outer cross-vein; third vein evenly and rather noticeably curved forward apically; penultimate section of fourth vein not half as long as ultimate section of fifth; frontal triangle smooth behind on sides *botanica*, n. sp.
16. Mesonotal vittae glossy black or dark brown, the central one sometimes partly red in middle, all without a trace of dusting 17
 Mesonotal vittae rather dull black and with greyish or brownish dusting 18
17. Mesonotal vittae entirely black, central one becoming brownish as it nears hind margin; a black spot on each humerus and basal angle of scutellum; frontal triangle bare on sides, ending in a rather long slender point, the sides concave on apical half *politella*, n. sp.
 Mesonotal vittae brownish-black, the central one red except on anterior and posterior extremities, the latter about middle of disc; humeri and basal angles of scutellum with at most reddish spots; triangle yellow, ocellar spot black and a faint reddish central streak from ocelli to anterior extremity, the sides almost straight and with a series of fine hairs close to edges *varivitta*, n. sp.
18. Mesonotal vittae entire, very broad, the pale ground colour almost obliterated between the vittae, where it is suffused with brown; halteres yellow, the knobs brown at apices *suffusa*, n. sp.
 Mesonotal vittae not attaining the hind margin, narrower than in *suffusa*, the ground colour pale yellow; halteres yellowish-white *albohalterata*, n. sp.

OSCINIS STIGMATELLA (Becker).

Ann. Mus. Nat. Hung., ix, 1911, 59.

This species is very readily separated from any other in the genus by the presence of but one deep black pleural spot, which is situated just below the prothoracic spiracle. In most cases when there is but one black mark on the pleura, it is on either the lower edge of the mesopleura or the upper part of the sternopleura. The third antennal segment is at least 1.5 times as long as wide, with the upper apex angulate, and in colour yellow, with infuscated upper and apical margin; the arista is yellow on the basal two segments and white on the third. The mesonotal vittae are five in number, rather dull black in colour because of the presence of greyish dust, and the humeri are without a distinct black spot; scutellum short and rounded, convex on disc, with black hairs and 4 to 6 marginal bristles or setulae. The fourth vein is hardly arched beyond the outer cross-vein and the third is nearly straight, ending usually nearer to apex than fourth. Ultimate section of fifth about half as long as its preceding section. Length, 3 mm.

All my material is from the vicinity of Sydney, N.S.W. The type locality is Sydney.

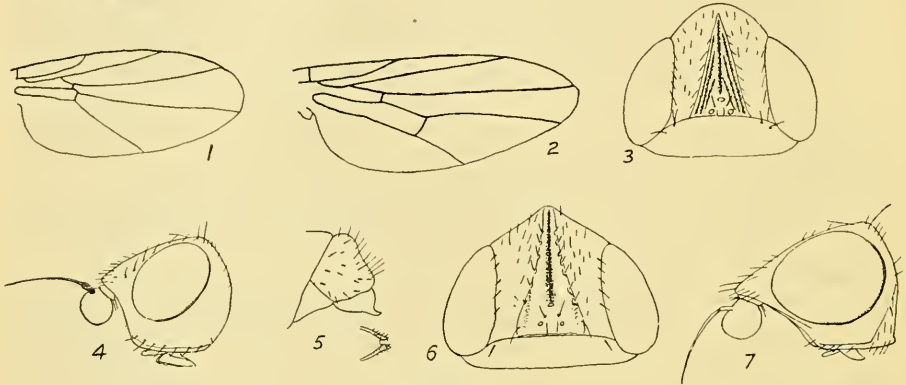
I have some doubt about the accuracy of the identification of this species from Formosa by Becker.

OSCINIS GROSSA (Malloch). Fig. 2.

PROC. LINN. SOC. N.S.W., lvi, 1931, 70.

This species is the largest of the genus known to me from Australia, being 6.5 mm. in length. Unfortunately the specimens available lack antennae, so that it is impossible to say what the form of the third segment is, but the frontal triangle has a narrow central sulcus and on each side three converging sulci or furrows. The palpi are largely black as in *convergens*, but there are five black spots on each pleura, and the disc of the scutellum is browned in part, while the femora and at least the hind tibiae are stained with black or brown centrally. The female genital lamellae are short and broad, subtriangular, when seen from above, and black in colour. Wing as figure 2.

Tasmania.



Text-figs. 1-7.

1, *Diplotoxa tasmaniensis*, wing.—2, *Oscinis grossa*, wing.—3, *O. convergens*, frons.—4, *O. convergens*, head in profile.—5, *O. convergens*, terminalia of ♂ in profile and apex of same from below.—6, *O. federata*, frons.—7, *O. federata*, head in profile.

OSCINIS CONVERGENS, n. sp. Figs. 3-5.

♂, ♀.—Head yellow, frontal triangle, except sometimes narrowly along its edges, brownish-black, rather dull, occiput broadly brownish-black in centre except on vertical edge, third antennal segment narrowly infuscated above, arista fuscous, prelabrum yellow, palpi fuscous or blackened at apices. Frons as in Figure 3, usually three lateral furrows converging in front, but not confluent with the central sulcus, ocellar and postvertical bristles subequal, short and fine, the former proclinate and divergent; surface hairs stiff and black, quite fine, most numerous in front; frons projecting in profile (Fig. 4); eyes longer than high, subnude. Thorax yellow, but slightly shiny, mesonotum with five dull, slightly grey-dusted black vittae, the central one entire, narrowed from suture to near hind margin, widened at latter, submedian pair wide in front, tapered behind, not attaining either front or hind margin, sublateral pair extending from suture to postalar callus; surface hairs short, stiff and black, no evident punctures at their bases; humeral bristle short and fine, notopleurals 1 + 2; scutellum yellow, sometimes with a brown mark on each extreme lateral basal angle, convex, rather broadly rounded in outline, disc with a few fine black hairs, margin with four setulae, the apical pair longest and cruciate. Lower margin of mesopleura, a spot on centre of hypopleura, and a streak below upper edge of the sternopleura black, lower part of the sternopleura red. Sternopleural hairs fine and yellow; no propleural hair visible. Legs normal in form, yellow, apices of all tarsi slightly browned. Hairs short and black, pale on ventral surfaces of femora, claws black. Apical ventral spur on

mid tibia straight and about as long as diameter of the tibia. Wings greyish hyaline. Inner cross-vein distinctly proximad of apex of first vein, penultimate sections of third and fourth veins rather variable in length, the penultimate section of third always shorter than that of fourth, and the ultimate section of fifth vein always nearly half as long as its penultimate section. Abdomen orange-yellow, all tergites except the first brown at bases, the second with a darker brown spot at curve on anterior margin. Hairs fine and black. Hypopygium of male small, quite distinctive (Fig. 5), genital lamellae of female rather short and stout, tapered to apices, much as in *grossa* in general form, and fuscous in colour. Halteres yellow. Length, 3.5 mm.

Type, ♂, allotype, and 3 paratypes, Blundell's, A.C.T., 15 and 23.iii.1930 (L. F. Graham).

OSCINIS FEDERATA, n. sp. Figs. 6, 7.

♀.—Head yellow, ocellar spot black, triangle brown, shiny but not highly polished, centre of occiput brown, becoming yellow above, third antennal segment hardly darkened at insertion of arista, the arista fuscous; prelabrum yellow. Frons as Figure 6; head in profile as Figure 7; frontal hairs stiff and black; ocellar bristles not visible in type, the postverticals short and fine, the central sulcus on triangle entire and deep; eyes almost nude; arista subnude. Thorax yellow, shiny; mesonotum with five shiny vittae, the central one ceasing about midway between suture and posterior margin, black on both extremities, red in middle, the submedian pair black except narrowly on suture, wide in front and tapered behind, not attaining either margin, the sublateral pair largely brown, extending from suture to postalar callus; surface hairs short, stiff, and black, rather dense, and in minute punctures on the vittae. Scutellum convex, narrowly rounded in outline, with numerous stiff discal hairs that are black in colour, and about six marginal bristles, the apical pair strongest; notopleurals 1 + 2. Pleura coloured as mesonotum, the sternopleura except on upper margin red, the propleural spot brown, a streak on lower margin of the mesopleura, a spot on the pteropleura, and another on hypopleura, black, upper margin of mesopleura browned; postnotum broadly black in centre. Sternopleural hairs fine and white; propleura with a fine black hair. Legs normal in form, entirely yellow, tarsal claws black, brown at bases. Hairs short, black except on ventral surfaces of femora. Apical ventral spur of mid tibia black, short, and straight. Wings hyaline, narrower and more pointed than usual. Third vein straight, ending as far before apex of wing as fourth does behind it; inner cross-vein almost directly below apex of first vein; for other venational characters see specific key. Halteres yellow. Abdomen yellow, tergites broadly brown, pale only at apices, the hairs dark. Genital lamellae filiform. Length, 4 mm.

Type, Molonglo R., A.C.T., 4.iv.1930 (L. F. Graham).

OSCINIS BLUNDELLI, n. sp. Fig. 8.

♀.—Head yellow, frontal triangle almost glossy, brownish-yellow, dark brown to black on each side on posterior half and in the central sulcus, and black on ocellar spot, occiput with a broad central black mark. Sulcus wide above, tapered below, no lateral furrows; ocellar and postvertical bristles subequal, short and fine; surface hairs black and stiff, most numerous in front. Head in profile as Figure 8; third antennal segment a little longer than wide, subangulate at apex above, yellow, with rather broad infuscation above and apically; arista black. Eyes a little higher than long, very indistinctly haired. Palpi brownish-yellow.

Thorax rather dull testaceous yellow, with greyish dust on the entire mesonotum, upper posterior portion of the mesopleura and the upper part of the pteropleura and hypopleura. Mesonotum with five black vittae, the central one incomplete behind, the submedian pair not attaining either anterior or posterior margin, tapered behind, the sublateral pair extending from suture to postalar callus; humeri with a brown spot, notopleural suture infuscated. Surface hairs black and stiff, not inserted in punctures; notopleurals usually 1 + 2, outer postalar longer than usual. Scutellum testaceous yellow, browned on lateral basal angles, with a number of stiff black discal hairs and four marginal bristles, the apical pair the longer. Sternopleural mark black, the other four pleural spots except the stigmatal one quite large. Legs yellow, fore and hind femora and hind tibiae marked with brown or black centrally, apices of all tarsi slightly browned, tarsal claws black. Apical ventral spur of mid tibia fully as long as apical diameter of the tibia and rather noticeably curved. Wings greyish hyaline. Inner cross-vein a little proximad of apex of first vein, third and fourth veins regularly divergent from outer cross-vein to apices; penultimate section of third vein shorter than penultimate section of fourth, ultimate section of fifth vein half as long as its penultimate section; third vein ending as far before apex of wing as fourth does behind it. Halteres yellow. Abdomen yellow, tergites broadly brown, only their apices yellow, hairs black except on sides of second tergite. Genital lamellae slender and elongate. Length, 2.5 mm.

Type and 1 paratype, Blundell's, A.C.T., 7.i.1930 (A. Tonnoir).

OSCINIS SERIATA, n. sp.

♀.—Similar in general colour and markings to *blundelli*, differing in having the palpi bright orange-yellow, not brownish-yellow, the mesonotum not so distinctly dusted, and the mesopleura without dust on the upper posterior portion. The frons and triangle are longer and narrower, with the latter having some black hairs arranged in a series of punctures along each side. The sulcus is entire and but little narrowed in front.

In nearly all other respects the two species are almost identical. Length 3 mm.

Type, Barrington Tops, 25.i.1922 (Nicholson); paratype, Fish River, N.S.W., 25.iii.1923 (Health Dept.).

OSCINIS NUBILIPALPIS (Malloch).

Proc. Linn. Soc. N.S.W., lvi, 1931, 72.

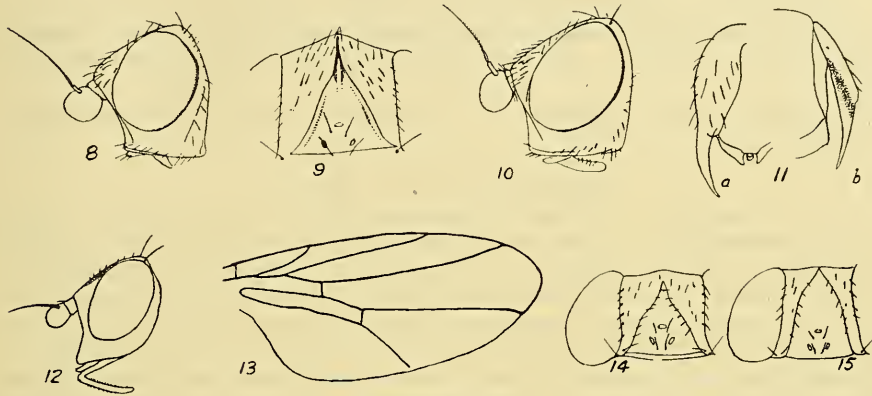
This species is quite similar in most respects to *blundelli*, differing in the lack of grey dust on the mesonotum and pleura, the glossy-black mesonotal vittae, much darker third antennal segment and palpi, and the almost entirely glossy-black femora and more extensively blackened hind tibiae. The mesonotal hairs are also much denser and situated in definite punctures; the male has the hypopygium spike-like behind in the type, and the female has the genital lamellae even more slender than does the female of *blundelli*.

Tasmania.

OSCINIS IMPRESSA, n. sp. Figs. 9-10.

♂.—Head testaceous yellow, frons reddish, darkest along triangle, the latter black, almost glossy, yellowish on posterior lateral angles; occiput black, with a rather broad yellow margin along eyes; third antennal segment narrowly infuscated apically; arista fuscous on basal two segments and base of third, brownish-yellow apically; prelabrum glossy-black; palpi yellow. Frontal hairs and

bristles black, genal hairs yellow except at posterior angle. Frons as Figure 9, the triangle with a single furrow along each side from near upper posterior angle to beyond middle, and with a slight central carina on anterior half or less; surface hairs stiff, longest along eyes and triangle, and more numerous anteriorly. Profile as Figure 10; third antennal segment about as high as long, rather broadly rounded in front and almost imperceptibly angulate at apex above. Eyes subnude.



Text-figs. 8-15.

8, *Oscinis blundelli*, head in profile.—9, *O. impressa*, frons.—10, *O. impressa*, head in profile.—11, *O. elstoni*, terminalia; a, from behind, b, in profile.—12, *Melanum multisulcatum*, head in profile.—13, *M. multisulcatum*, wing.—14, *Chloropisca monticola*, frons, right side incomplete.—15, *C. sydneyensis*, frons, right side incomplete.

Thorax rather dull testaceous-yellow. Mesonotum with five dull black vittae that are overlaid with slight yellowish-brown dust, visible when seen from the side and slightly in front, the central vitta entire, widened at posterior extremity, submedian pair broad, extending from humeri to posterior margin and slightly narrowed at posterior extremities, narrowly separated from the broad sublateral vittae that extend from the suture to the postalar callosities; humeri with a small brown spot. Surface hairs black, decumbent and quite dense, situated in almost imperceptible punctures on the black vittae. A black mark on notopleural suture above the spiracle, lower part of the sternopleura, a large spot on the hypopleura and another on the pteropleura and the lower half of the mesopleura, glossy black, no black spot on the propleural spiracle. The single hair on each pteropleura may be an abnormal occurrence in this specimen and may not hold in a series of examples of the species. Scutellum short, rather narrowly rounded at apex, convex, pale yellow, with a brown mark below at each lateral basal angle, discal hairs black, stiff, margin with about six setulae, the apical pair longest and quite close together. Legs yellow, all femora and hind tibiae rather irregularly stained with black centrally, fifth tarsal segment of all legs black or fuscous. Apical ventral spur of mid tibia not longer than tibial diameter, straight. Wings greyish hyaline. First vein rather thick apically; inner cross-vein a little proximad of apex of first vein; penultimate section of third vein a little longer than penultimate section of fourth, the latter a little more than half as long as ultimate section of fifth and about one-fifth as long as its own ultimate section, the ultimate section of fifth not half as long as its preceding section. Squamae with dark margin and fringe. Halteres yellow. Abdomen rather broad, black on dorsum, the posterior lateral

angles of second and third tergites seen from above, and the apical margins of fourth and fifth tergites pale yellow. Surface hairs black; genital lamellae slender and dark. Length, 3.5 mm.

Type, Geeveston, Tasmania, Dec. 7, 1922 (A. Tonnoir).

OSCINIS SULCATA (Becker).

Ann. Mus. Nat. Hung., ix, 1911, 58, Tab. 1, fig. 2.

This species is a little larger than *nubilipalpis* Malloch, with the frons more protuberant in front, the triangle longer, genae higher, the sides of the scutellum less extensively blackened, and the amount of black colouring on the legs much less.

Blundell's, A.C.T., 14.iv.1931 (L. F. Graham). Type locality, Mt. Victoria, N.S.W.

OSCINIS ELSTONI, n. sp. Fig. 11.

♂, ♀.—Head yellow, the frontal triangle and occiput except the lateral margins shiny brownish-black, antennae and aristae black, the second segment of former brownish; prelabrum brownish-black, forming two elongate backwardly-directed slender streaks. Frontal triangle nearly filling the vertex almost triangular, the sides very slightly concave near apex, the apex forming a short linear strip, the surface with 4 to 6 fine striae on each side that meet on the central line in front of ocelli; no central sulcus developed, frontal bristles weak, hairs short and fine, dark. Antennae rather small, third segment about as long as wide, narrowly rounded at apex; arista subnude. Face vertical. Gena about as high as width of third antennal segment. Eyes subnude, about as high as long, not evenly rounded. Palpi yellow.

Thorax yellow, mesonotum with 5 slightly shiny black vittae, the sublaterals postsutural, the others quite broad and covered with grey dust; humeri with a black spot. Hairs and bristles black; notopleurals 1+2. Scutellum yellow at base, suffused with black on disc, and black on margin, the hairs and bristles black. Pleura with 4 black spots, the stigmatal one lacking or poorly developed. Legs yellow, all femora except their extremities black, hind tibiae browned or blackened centrally, all tarsi apically browned, the fore pair more extensively than the others. Apical ventral spur on mid tibia black, of moderate length. Wings brownish hyaline, veins brown and rather thick. Third costal division from two-thirds to three-fourths as long as second; third vein distinctly curved forward, ending distinctly farther in front of apex of wing than the fourth does behind it, the latter not noticeably bent or arched beyond the outer cross-vein, and almost straight so that the first posterior cell is distinctly widened apically; penultimate section of third vein shorter than that of fourth, the latter about half as long as ultimate section of fifth and one-sixth as long as its own ultimate section, the apical section of fifth vein about two-thirds as long as its preceding section. Abdomen yellow, broadly brown to black on dorsum, the hairs black. Male hypopygium with black basal segment, the superior forceps brown, the inferior processes yellowish-brown. Posterior and lateral aspects of hypopygium as Figure 11. Genital lamellae of female black, short and stout, broadly rounded at apices. Length, 2-2.5 mm.

Type, ♂, allotype, and 3 paratypes, Blundell's, A.C.T. (L. F. Graham, H. M. Barnes); one paratype, Mt. Lofly Rge., S. Aust. (A. H. Elston).

The slender superior hypopygial forceps of the male are characteristic of the species.

OSCINIS CANALICULATA Becker, var. TRISULCATA, n. var.

Becker has described the typical form of this species as having the legs except the apices of the tarsi yellow. In the Australian variety the fore femora are browned on a short stretch of dorsum on apical half, while the mid and hind femora are almost imperceptibly similarly browned, and sometimes the hind tibiae are very faintly browned at middle. The Formosan form is stated to have but two striae or furrows on each side of the triangle while in *trisulcata* there are three or four such furrows, of which the inner two usually curve round and connect in front of the anterior ocellus. The third antennal segment is about 1.5 times as long as wide and quite noticeably angulate at apex above, the aristaе are yellow on the basal two segments and white on the third, the latter being minutely white pubescent. It is worth noting that, if this is the species Becker had before him, he did not state in his description that the third antennal segment was unusually long for the genus he placed the species in. In fact the character would actually place the species in the genus *Parectecephala* Becker in his generic key. The latter, however, has the mesopleura haired behind, while in this species the mesopleura is bare. The mesonotal vittae are five in number, dull black because of greyish-brown dusting, and the pleural spots are usually five in number, but the one on the pteropleura is very faint and the sternopleural one is mainly or entirely red, as is also sometimes even the one on the mesopleura. In all three males before me the scutellum is broadly browned on the disc, but in the one female the scutellum is entirely yellow. The third wing-vein is very slightly curved forward at apex, and the fourth is practically straight beyond the outer cross-vein so that the first posterior cell is widened a little at apex, and the ultimate section of the fifth vein is about half as long as its preceding one. Length, 2.5 mm.

Type, ♂, Como, N.S.W. (Peterson). Allotype, and two male paratypes, Blundell's, A.C.T. (A. Tonnoir, L. F. Graham).

It is not improbable that this is a distinct species rather than a variety of the Formosan one, but they are so similar that only a direct comparison of specimens will decide the point.

OSCINIS PALLIDISETA (Malloch).

PROC. LINN. SOC. N.S.W., lvi, 1931, 71.

This species is one of the few in the genus in Australia that have the aristaе with the third segment white and minutely white pubescent. Here the basal two segments are yellow. The frontal triangle is highly polished, brownish-black in colour, and entirely smooth, filling more than three-fourths of the width at vertex, with the sides very slightly concave and the apex at anterior margin of frons. The two pairs of vertical bristles are quite prominent for this genus and the ocellar and postvertical pairs are short and very fine. Third antennal segment broader and wider than in the next preceding species, with distinct upper apical angle, black above, yellow below; palpi brownish-yellow; gena at middle about half as high as width of third antennal segment. The mesonotal vittae are broad, rather dull because of brown dusting, and the scutellum is broadly infuscated on the sides. Legs slender, largely browned.

Sydney, N.S.W. I have seen only the type specimen.

OSCINIS VARISETA, n. sp.

Head yellow, paler below and on face, the triangle glossy brownish-black, with no trace of sulci or submarginal hairs, filling a little more than half of the vertex the sides almost straight, the apex at anterior margin of frons. In both the



specimens at hand the frons is sunken on each side of the triangle though this may be abnormal, but the surface is distinctly shiny, which is not the case in related species, and the higher power lenses show minute longitudinal striae, most noticeable behind. The antennae are smaller than in the immediately preceding species, with the third segment not longer than its greatest width, slightly angulate at apex above, yellow below, black above, the two other segments black; arista black or fuscous on basal two segments, white on the third slender segment. Gena rather swollen centrally, wider than the third antennal segment. Palpi yellow.

Thorax yellow, glossy, the mesonotum with three broad glossy-black vittae, the central one extending from over anterior curve to midway from suture to posterior margin, the other two extending from posterior edges of humeral callosities to a short distance from postalar callosities, widened in front of suture and again behind it owing to the fusion with the postsutural short sublateral vitta. Surface hairs fine and black, not situated in noticeable punctures; notopleurals 1 + 2; humeri with a black spot. Pleura with four black spots, the prothoracic spiracular one lacking. Scutellum with a dark mark at basal angles, hairs fine and dark, the margin with about four black setulae, the apical pair strongest, disc convex. Legs yellow, all femora extensively infuscated centrally, the tibiae, except the hind pair, narrowly infuscated centrally, fore tarsi almost entirely, and the apices of other tarsi browned. Wings greyish hyaline, veins brown. Third vein straight on apical section, fourth almost straight beyond the outer cross-vein, diverging from third apically; second costal section hardly longer than third; penultimate section of third vein about half as long as that of fourth vein, the latter about one-fourth as long as its ultimate section and longer than ultimate section of fifth vein, the latter not much if any more than one-third as long as its preceding section. Abdomen yellow, the tergites broadly infuscated, the bases and apices narrowly pale; genital lamellae of female black, slender and of moderate length. Length, 2.5 mm.

Type ♀ and one paratype, Mt. Wellington, Tasmania, 15 Nov., 1922 (A. Tonnoir).

A very distinct species because of the shiny and microscopically striate lateral parts of frons and the trivittate mesonotum. The short ultimate section of the fifth vein is also a rare character in the genus.

OSCINIS OCELLARIS, n. sp.

♂, ♀.—Head testaceous yellow, frons darker, the triangle yellow to brown, rather variable, the ocellar spot black, and a black or dark brown stripe running from ocelli to anterior extremity, the centre rather depressed, which appearance is more emphasized by the dark central stripe, the surface without hairs, the sides almost straight, the tip at about one-fourth from anterior margin of frons. Ocellar bristles much longer and stronger than usual, about as long and strong as either pair of verticals, the postvertical pair very short; surface hairs black, not numerous, those along the edges of frons and triangle stronger than the others. Occiput with a central brownish-black mark that is as wide as the triangle at vertex. Antennae yellow, third segment infuscated above and at apex; aristae fuscous, rather distinctly pubescent. Eyes subnude, oblique, greatest height and greatest length subequal. Gena a little less than equal to width of third antennal segment. Prelabrum and palpi yellow.

Thorax yellow, shiny, not glossy, mesonotum with five rather dull black vittae, the short postsutural one very narrowly separated from the submedian one, the disc rather dark brownish-yellow, the whole surface with fine brownish-dusting. Surface hairs short, decumbent, black, and not inserted in distinct punctures, the

bristling normal. Pleura paler than mesonotum, with 5 dark spots, the three upper paler, the one on the sternopleura and that on hypopleura black. Scutellum yellow, largely blackened on sides, sometimes only a central line and apex yellow, hairs and bristles black. Apical pair of bristles longer and stronger than usual, distinctly longer than the dorsocentral bristles, the lateral pair well in front of the apicals and about as long as the dorsocentrals. Legs brownish-yellow, without black markings, the femora and apices of tarsi a little darker than other parts; mid tibia with a moderate apical ventral black spur. Wings brownish hyaline, veins brown, rather thick. Third section of costa more than half as long as second; third vein sloping forward and ending in costa distinctly farther before apex of wing than fourth vein does behind it, the first posterior cell widened apically; penultimate section of third vein about half as long as penultimate section of fourth; ultimate section of fifth vein about half as long as its penultimate section. Halteres yellow, knobs white. Abdomen dark brown, shiny, basal segment and apex of fifth yellow. Length, 2 mm.

Type, ♂, Sydney, N.S.W., 23.xi.1924. Allotype, Mooni, nr. Cott's, 14.ii.1925. Paratype, Eidsvold, Qsld. The first two specimens belong to the Public Health Dept. collection, Sydney.

OSCINIS SUBARCUATA, n. sp.

♂.—Face and genae pale testaceous-yellow, densely white-dusted, the frons darker brownish-yellow, paler in front, triangle entirely glossy-black, occiput except the margin and lower half black; antennae black, second segment brownish-red at base, aristae black; hairs and bristles on frons black, genal hairs yellow. Frons at vertex about half the head-width, the triangle extending to anterior margin, rather narrow, with almost straight sides, the width at vertex hardly three-fifths that of vertex, the surface almost smooth, only a few irregular faint impressed lines on the lateral portions, but no distinct sulci or furrows; ocellar bristles erect and slightly divergent in type, the four verticals and the postverticals quite fine and not long; frontal hairs stiff, those along the sides of the triangle forming a series that is more evident than that along eye-margins. Face vertical, the vibrissal angle more developed than usual in this genus but not protruded, foveae undeveloped; eye slightly oblique, a little higher than long, bare; gena about one-fifth of the eye height, and about four-fifths as high as width of the third antennal segment, the latter wider than long, broadly rounded at apex; aristae subnude, second segment four times as long as thick; prelabrum black, glossy; proboscis yellowish-brown, thick, with stout fleshy reflexed apical section; palpi lanceolate, yellow at bases, black at apices.

Thorax glossy brownish-yellow, with the usual five glossy-black vittae, the three central widened in front, the median one entire, the submedian pair not attaining either extremity of mesonotum, the sublaterals short and postsutural, scutellum broadly infuscated at base, pleura with four large black marks, and a small one below the prothoracic spiracle; hairs and bristles black. Dorsal hairs quite dense, short and decumbent, not inserted in distinct punctures, humeral present, notopleurals 1+2; scutellum convex, narrowly rounded at apex, with four fine black marginal bristles. Legs brownish-yellow, fore coxae browned in front, all femora extensively blackened, hind tibiae black except at extremities, mid tibiae brown centrally, fore tarsi and apices of other tarsi brown; mid tibial spur black and of moderate length. Wings brownish hyaline, veins brown. First costal section almost as long as second, the latter from fusion of first vein and costa nearly twice as long as the third section, the costal vein quite noticeably thickened

from fusion of veins and tapered off apically; inner cross-vein about one-third from apex of discal cell, penultimate sections of third and fourth veins subequal in length, the latter but slightly shorter than ultimate section of fifth, veins 3 and 4 divergent apically, ultimate section of fifth vein a little more than one-third as long as its penultimate section. Abdomen glossy blackish-brown on dorsum, only narrowly yellow on sides as seen from above and at apex; hairs black. Knobs of halteres cream-coloured. Length, 3 mm.

Type, Eaglehawk Neck, Tasmania, 20.xi.1922 (A. L. Tonnoir).

OSCINIS BOTANICA, n. sp.

♂.—A much smaller and even darker coloured species than *subarcuata*, with more or less indicated mesonotal dusting, and with the frontal triangle different.

Face and genae testaceous yellow, densely greyish-white-dusted, frons dull yellow, the triangle glossy-black, occiput black, narrowly brown on edges; hairs and bristles black. Antennae entirely black; arista black. Proboscis brown; palpi black. Frons at vertex half the head-width, narrowed in front, triangle occupying three-fourths of the width of vertex, and extending to anterior margin, the sides quite evidently emarginate on anterior third, the surface smooth; ocellar bristles larger than the postvertical pair, proclinate and divergent, the four verticals longer and stronger than the postverticals; surface hairs stiff, not very long. Face shallowly concave in profile, vibrissal angle slightly produced, foveae hardly evident. Gena about one-fifth as high as eye and about four-fifths as high as width of third antennal segment, the latter about as high as wide and more narrowly rounded at apex than in *subarcuata*; eye a little higher than long, slightly oblique, bare.

Thorax marked as in *subarcuata*, but the vittae not as clearly differentiated. Scutellum black, rather dull, convex, narrowly rounded at apex. Legs black, apices of fore coxae, the knees narrowly, and bases of tarsi brownish-yellow. Apical ventral spur of mid tibia black, straight. Wings greyish hyaline, veins blackish-brown. First costal section about two-thirds as long as second, the latter not twice as long as third; the third vein very distinctly curved forward and ending in margin farther before tip of wing than fourth does behind it; ultimate section of fifth vein about three-fourths as long as its penultimate section; costal vein not noticeably thickened beyond first vein. Abdomen black, quite dull, yellowish at apex of fifth tergite. Knobs of halteres pale yellow. Length, 1.75 mm.

Type, Botany Bay, N.S.W., on flowers (H. Peterson).

OSCINIS POLITELLA, n. sp.

♀.—Head pale testaceous yellow, occiput black on upper half, the lateral margins hardly paler, yellow below, frons yellow, brownish above and along triangle, the triangle glossy brownish-black, paler in front; antennae with the third segment infuscated on upper and apical portions, arista black on basal thickened part and brownish-yellow on apical part; proboscis and palpi yellow; prelabrum black in front; hairs and bristles on frons black, hairs on genae yellow. Frons at vertex more than half the head-width; triangle at vertex three-fifths of width between eyes, extending as a slender point to anterior margin, the sides slightly emarginate, surface smooth, without hairs even on sides; ocellar bristles fine, divergent and proclinate, longer than the short postvertical pair, the four verticals fine and longer than the ocellars; surface hairs on frons fine and rather numerous, those along the margins of the triangle longer than the others, except a few on upper part of each orbit. Face concave slightly in profile, the parafacials

about half as wide as height of gena, the latter three-fourths as high as width of third antennal segment; eye a little higher than long and slightly oblique, bare, five times as high as gena. Third antennal segment about as long as wide, with a slight angle at upper apex; arista with the second segment about four times as long as thick, third subnaude.

Thorax glossy-yellow, the mesonotum slightly browned and with five glossy-black vittae, the central one entire, the submedian pair abbreviated in front and behind, the sublaterals postsutural; humeri with a large black spot; surface hairs and the bristles black, the latter as follows: 1 humeral, notopleurals 1+2, postalars 2, and 1 pair of dorsocentrals; the hairs not inserted in punctures. Scutellum pale yellow, with a small black mark on each side at base that is hardly visible from above, disc but little convex, outline subtriangular, slightly produced between the apical pair of bristles which are about as long as scutellum and much longer than the preapical pair, surface hairs fine and black. Pleura with three black marks, a large one on lower part of sternopleura, a small one on lower margin of mesopleura, and a round one on hypopleura, and traces of dark spots on upper central part of mesopleura and centre of pteropleura; sternopleural hairs yellow. Legs yellow, apical two or three segments of fore tarsi and apical one of other tarsi browned; apical ventral spur on mid tibia black, about as long as apical diameter of tibia; fore tarsi not dilated. Wings brownish hyaline, veins brown. First costal division about two-thirds as long as second, the latter not 1.5 times as long as third; second vein straight, not noticeably bent forward at apex, third diverging from second and not curved forward at apex, ending in costa a little farther before wing tip than does the fourth behind it, first posterior cell widened to apex; inner cross-vein almost below apex of first vein and at two-fifths from apex of discal cell; penultimate section of third vein but slightly shorter than penultimate section of fourth, the latter three-fourths as long as ultimate section of fifth, which latter is almost exactly half as long as discal cell. Abdomen dark brown, glossy, with traces of yellow at apices of tergites, most distinct on fifth tergite; hairs dark. Halteres white. Length, 2.5 mm.

Type, Forrest, A.C.T., 23.ii.1930 (A. L. Tonnoir).

It appears highly probable that the pleural spots will be more numerous in other specimens of this species.

OSCINIS VARIVITTA, n. sp.

♀.—The type specimen is slightly teneral and the shrunken head gives little ground for accuracy in dimensional description, but the following is as definite as is possible under the circumstances. Head yellow, only the small ocellar spot and a large central quadrate mark on the occiput black, the triangle glossy and with a trace of a brown central vitta from ocelli to anterior extremity; antennae with upper apical part of third segment brown; aristae dark brown; surface hairs and bristles on frons black, genal hairs yellow. Frons longer than its central width, narrowed in front, the triangle apparently filling the entire vertex because the latter is glossy at upper lateral angles of frons, longer than its upper width, extending to anterior margin rather widely, the surface smooth, but with one or two series of fine black hairs on each side from level of anterior ocellus to near anterior extremity. It appears worth noting here that in the group of species that have a broad central sulcus on the triangle all but one, *blundelli*, have hairs on the sides of the triangle, and that in the present species it may be that the sulcus is not developed because of the shrinkage of the head, which has pressed in on the triangle from the sides. Ocellar bristles fine, proclinate and divergent,

longer than the short, fine postvertical pair, the verticals longer and stronger than the ocellars. Eye higher than long, slightly oblique, bare; parafacial visible in profile; gena higher than width of third antennal segment, the latter about as long as wide, and rounded at apex; arista with the second segment about twice as long as thick, third slender, subnude. Proboscis short and stout, yellow, palpi unicolorous; prelabrum honey-yellow, possibly darker in well-matured examples.

Thorax glossy honey-yellow, the mesonotum with five black vittae of which the central one is extensively reddish-yellow centrally, black only at the extremities, and the submedian pair reddish-yellow at suture, the sublaterals short and post-sutural; humeri slightly reddish-yellow above; all hairs and bristles black. Pleura with reddish marks on lower margin of mesopleura, lower half or more of the sternopleura, and on hypopleura. Scutellum yellow; postnotum black. Bristles on mesonotum as follows: Humeral 1, notopleurals 1+2, postalars 2, and dorsocentrals 1 pair; surface hairs moderately numerous, short and decumbent. Scutellum slightly convex on disc, narrowly rounded at apex, the apical pair of bristles as long as scutellum and much longer than the preapical pair, discal hairs short and fine. Legs yellow, rather stout, the apical ventral spur on mid tibia black, short. Wings greyish hyaline, more pointed than in the immediately preceding species, and with almost identical venation. Abdomen yellow, each tergite from second to fifth with a transverse blackish-brown fascia near base, usually widened centrally and at lateral curves; surface hairs black, genital lamellae blackish-brown, slender and finely haired. Halteres lemon-yellow. Length, 3.5 mm.

Type, Eaglehawk Neck, Tasm., 17.xi.1922 (A. L. Tonnoir).

The invasion of the frontal triangle by the hairs is characteristic of such genera as *Ectecephala* Macquart, but here I have not considered it as the basis for even the subgeneric segregation of the species of *Oscinis* in which the character occurs, though it is probable that some subsequent worker on the family may do so.

OSCINIS SUFFUSA, n. sp.

Head testaceous yellow, frons orange-yellow, darker above, the triangle glossy-black, slightly less intense posteriorly on angles, occiput black centrally, merging into brown laterally and almost yellow on extreme edges, yellow below; antennae yellow, third segment black except on lower basal portion; aristae black; proboscis and palpi orange-yellow; prelabrum black; hairs and bristles of frons black, genal hairs yellow. Frons in profile projecting beyond eyes by about the width of third antennal segment, face receding below, parafacial at centre linear; frons at vertex half the head-width, its length about 1.25 times its width, slightly narrowed in front; triangle extending as a line to anterior margin, widened from anterior fourth to vertex, the sides practically straight, the surface smooth, but there is a short central depression, though not a sulcus, in front of the anterior ocellus for about a third of the distance to apex of the side part; no lateral hairs present; ocellar bristles almost erect, and divergent, subequal in length to the postvertical pair, the four verticals a little longer and stronger; surface hairs fine, becoming more dense in front. Third antennal segment a little wider than long, broadly rounded in front; arista with the second segment about three times as long as thick, third minutely pubescent. Eye about as high as long, narrowed in front, bare. Gena two-thirds as high as width of third antennal segment.

Thorax with the mesonotum almost entirely black, the usual vittae separated by hardly visible brownish-yellow lines, only the humeral and notopleural regions noticeably yellow, the humeri with a black spot; pleura pale yellow, with large black spots on sternopleura, lower half of the mesopleura, the hypopleura and

pteropleura; mesonotum rather dull because of the slight brownish dust present and the small rather closely placed piliferous punctures; surface hairs and bristles black. Bristles as in the immediately preceding species. Scutellum yellow, rounded in outline, convex on disc, with numerous fine black discal hairs and about 6 black marginal bristles, the apical pair the longest, subequal in length to the scutellum. Legs yellow, bases of fore coxae, posterior surface of fore femora, centre of mid femora, parts of hind femora, and the centre of hind tibiae, blackened or browned; mid tibia with the apical ventral spur short and black. Wings greyish hyaline, veins brown, venation almost as in the two next preceding species. Abdomen glossy blackish-brown, yellow at base, and on the apex of fifth tergite, hairs black, genital lamellae blackish-brown, slender, and finely haired. Knobs of halteres dull yellow, darkened above. Length, 3.5 mm.

Type, Canberra, A.C.T., 1.x.1930 (A. L. Tonnoir).

OSCINIS ALBOHALTERATA, n. sp.

♂, ♀.—Head pale yellow, the face and genae always paler than the frons, the latter with a glossy-black triangle, the posterior lateral angles of which are yellow; antennae with the third segment almost all black, usually more or less distinctly yellow on lower basal part; aristae black on basal two segments, third yellowish-brown; proboscis and palpi yellow; prelabrum black; occiput black on upper half, the lateral margins and lower half yellow; hairs and bristles of frons black; genal hairs yellow. Frons less than half the head-width, parallel-sided, subquadrate, surface hairs longer and denser in front, lacking between upper triangle and orbits; triangle extending as a line to anterior margin, the linear part yellow and about one-fourth as long as the wide part, the latter smooth and without hairs. Ocellar bristles divergent and proclinate, about as long as postverticals and shorter than the verticals. Third antennal segment about as long as wide, broadly rounded at apex; arista tapered at base, subnude. Eye a little higher than long, slightly oblique, bare. Gena two-thirds as high as width of third antennal segment and one-fifth as high as eye. Parafacials in profile invisible. Proboscis stout.

Thorax glossy-yellow, mesonotum with five black vittae that are almost glossy, though overlaid with indistinct brownish dust, the central vitta entire though the posterior extremity is merely brown and not deep black, the submedian pair incomplete in front and behind, dilated before suture, the sublaterals short and postsutural; all hairs and bristles black; humeri with a black spot, and a small black dot in front of suture laterad of the submedian vittae. Pleurae with 4 black marks, none below the prothoracic spiracle, the mesopleural one sometimes bisected posteriorly. Scutellum short, convex on disc, narrowly rounded in outline, entirely yellow, with numerous black discal hairs and four marginal bristles. Mesonotal bristles normal in number. Legs yellow, fore femur with a brown patch on postero-dorsal surface near apex, the other femora sometimes slightly browned centrally, hind tibia brown centrally, fore tarsi browned apically, the other pairs with apical two segments browned. Wings greyish hyaline, veins fuscous. Venation almost as in the preceding species but the penultimate section of third vein shorter than that of fourth. Abdomen yellow, slightly shiny, the dorsum largely brown with the bases of the tergites darker. Male hypopygium with small beak-like forceps. Halteres yellow. Length, 2 mm.

Type, ♂, allotype, and 10 paratypes, Sydney, N.S.W. Paratypes, Blundell's, A.C.T., and Mt. Kosciusko, N.S.W. (A. L. Tonnoir).

MELANUM Becker.

Arch. Zool. Budapest, i, 1910, 50.

This genus is readily distinguished from other Chloropinae by the angular and slightly produced vibrissal angle, and the rather elongated and geniculated proboscis. The third antennal segment is not noticeably longer than wide and is rounded at apex, and black in both the species before me; the palpi are also black. In other respects very similar to *Oscinis*.

The two species from Australia may be separated as in the following key:

1. Frontal triangle shiny black, rather broadly triangular, not extending to anterior margin of frons, with about a dozen fine longitudinal striae . . . *multisulcatum*, n. sp.
- Frontal triangle glossy-black, not striate, with or without a shallow central longitudinal sulcus *montanum*, n. sp.

MELANUM MULTISULCATUM, n. sp. Figs. 12, 13.

♀.—Face, genae, and lower half of postocular orbits testaceous yellow, frons darker yellow, merging into dark brown on upper half, occiput black, triangle shiny black; antennae and palpi black, aristae fuscous; all hairs and bristles black. Frons almost half the width of head at vertex, narrowed in front, triangle about three-fourths the width of vertex, broadly triangular, its apex falling short of attaining anterior margin, the sides slightly emarginate, surface with about a dozen fine striae. All four vertical bristles distinct though not very conspicuous, the ocellar and postvertical pairs much shorter and finer, subequal, postverticals not markedly incurved, the ocellars proclinate and slightly if at all divergent; frontal hairs longest along eyes and triangle. Profile as Figure 12. Arista subnude. Palpi rather large and lanceolate. Upper occiput brown-dusted on sides.

Thorax with the dorsum brownish-black, not shiny, greyish-dusted, most distinctly so on lateral margins, without well-defined vittae; scutellum of same colour, paler, yellowish-brown, centrally. Humeral and anterior notopleural bristles much shorter and weaker than the posterior notopleurals, the surface hairs black, short, fine, and decumbent. Scutellum with two moderately long apical and two much shorter preapical marginal bristles, the discal hairs longer than those on mesonotum. Pleurae brownish-yellow, glossy except on upper posterior portion of the mesopleura, the upper half of the pteropleura and on hypopleura, which are grey-dusted, a fuscous spot on prothoracic spiracular region, a glossy-black mark on lower margin of mesopleura, one on pteropleura, and the lower half or more of the sternopleura glossy-black, the hypopleura with another black mark; postnotum black centrally. Legs dull black, extreme apices of femora, the bases of tibiae more broadly, fulvous yellow, the base of metatarsi brownish-yellow. No exceptional armature on legs, the mid tibiae with a black apical ventral spur of moderate length. Wings brownish hyaline, veins brown. Venation as Figure 13. Abdomen dull dark brown, with fine black hairs that are longest at apices of the tergites. Stems of halteres brown, knobs pale yellow. Length, 2 mm.

Type, Barrington Tops, N.S.W., 25.i.1922 (Nicholson).

MELANUM MONTANUM, n. sp.

♀.—Similar to the preceding species in general colour, but the two specimens appear to have been in liquid so that fine distinctions in colour can not be dependably drawn. However, the frons is entirely brownish-black, the triangle is entirely glossy-black, the palpi are yellowish at bases, and the second antennal segment is brownish-yellow, distinctly paler than the black third segment. The lack of minute longitudinal striae on the triangle appears to me the most dependable distinguishing character, but it is impossible to determine whether

there may be a longitudinal sulcus from the ocelli to anterior extremity in well preserved specimens, though there is such a sulcus or depression in one specimen and hardly a trace of it in the other now before me.

Thorax darker on sides than in the preceding species, the mesonotum paler between three glossy-black vittae, not noticeably dusted, though possibly abraded. In other respects as above, but the scutellum is entirely black. Wings brownish hyaline, veins brown, venation almost as in the preceding species, but the third vein not as noticeably bent forward. Abdomen black, almost glossy. Legs more extensively yellow, the tibiae blackened centrally, and the tarsi yellow on the basal three or four segments. Length, 2 mm.

Type and one paratype, Mt. Lofty Rge., S. Aust. (A. H. Elston).

CHLOROPISCA Loew.

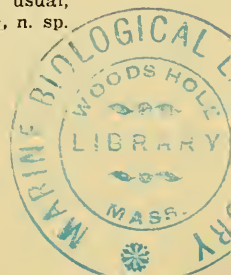
Zeitschr. f. Entom. Breslau, xv, 1866, 79; Becker, *Ann. Mus. Nat. Hung.*, ix, 1911, 73; Malloch, *Proc. Linn. Soc. N.S.W.*, lii, 1927, 429.

This genus was originally distinguished from *Chlorops* Meigen by its describer on the basis of the flattened disc of the scutellum with its more or less definite marginal rim above and approximated pair of apical bristles. These characters do not hold good throughout the genus, and some years ago I introduced as a distinguishing character one that is invariably present in the genus. This consists of a flattened elongate-oval area on the posterodorsal surface of the hind tibia near the middle that is furnished with microscopic pile, usually changeable in colour when viewed from different angles. I incline to the restriction of the genus to those species in which the mesopleura is microscopically haired on the posterior half or less.

There are two species already on the Australian list, one of them, *subnotata* Malloch, being a characteristic species with distinctly flattened disc of the scutellum and closely approximated apical bristles, as well as hairs on the hind portion of the mesopleura, but of the other, *monticola* Malloch, I have seen but one specimen, and it has been pinned in such a manner that it is impossible to tell if the mesopleural hairs are present or not. I have now a third species, unfortunately similarly pinned, that I place tentatively in this genus. The only other genus that it may possibly belong to is *Chloropsina* Becker, of which I do not know the genotype, but the only species I have placed therein from Australia has not a sensory area on the hind tibia, and has the halteres with black knobs.

The three species now before me may be distinguished as below.

1. Scutellum fully as long as wide, somewhat subtriangular, tapered apically, flattened on disc, with a distinct sharp marginal rim; frontal triangle not entirely black, partly yellow, more or less irregularly infuscated, and with fine hairs invading its sides; mesonotum yellow, with five glossy black vittae *subnotata* Malloch
Scutellum wider than long, not or but little flattened on disc, not rimmed; frontal triangle entirely glossy-black, and with no hairs invading its sides; mesonotum glossy-black 2
2. Palpi yellow; antennae orange-yellow, third segment infuscated except at base; frontal triangle narrowed to a point in front, the sides slightly emarginate (Fig. 14); penultimate section of third vein about two-thirds as long as penultimate section of fourth; discal cell below inner cross-vein a little wider than length of the latter *monticola* Malloch
Palpi black; antennae entirely black; frontal triangle not as much narrowed in front, the sides slightly convex (Fig. 15); penultimate section of third vein not half as long as penultimate section of fourth vein; discal cell narrower than usual, below inner cross-vein not as wide as length of latter *sydneyensis*, n. sp.



CHLOROPISCA SUBNOTATA Malloch.

Proc. Linn. Soc. N.S.W., lii, 1927, 429.

I have seen five specimens of this species, all from New South Wales in the vicinity of Sydney.

CHLOROPISCA MONTICOLA Malloch. Fig. 14.

Proc. Linn. Soc. N.S.W., lii, 1927, 430.

I have before me only the type specimen, a female, of this species, from Blue Mts., N.S.W.

Both the above belong to the Health Department collection in Sydney.

CHLOROPISCA SYDNEYENSIS, n. sp. Fig. 15.

♀.—A small species very like *monticola*, differing in being darker in general colour, with the pleural markings larger, the antennae and palpi black, arista black, legs honey-yellow, apices of fore tarsi brown. Frons yellow, dull, at vertex about two-fifths of the head-width, narrowed to anterior margin, the triangle glossy-black, as Figure 15. Eye almost nude. Antennae entirely black, third segment not as long as high, broadly rounded at apex; arista entirely black, short pubescent, thickened at base. Gena not more than half as high as width of third antennal segment and about one-eighth as high as eye, with some very fine pale hairs along lower edge. Proboscis short and stout, dark brown; palpi black. Thoracic dorsum and pleura glossy-black, the former with slight brownish dust, the notopleural areas each with a brownish-yellow mark and the pleural sutures also brownish-yellow. Surface hairs very short, dark, and decumbent; notopleurals 1+2. Scutellum yellow, broader than long, rounded at apex and convex on disc, with some very fine short discal hairs and four fine black bristles, the apical pair the longer, and not very closely placed. Legs honey-yellow, apical tarsal segment brown. Wing greyish hyaline, veins brown. First and third costal sections subequal in length, second about 1.25 as long as either; veins 3 and 4 divergent apically; ultimate section of fifth vein not more than one-third as long as its penultimate section. Abdomen glossy-black, venter yellow, hairs black, genital lamellae slender and finely haired. Halteres pale yellow. Length, 1.5 mm.

Type, Sydney, N.S.W., 2.ix.1919 (Health Dept.).

PEMPHIGONOTUS Lamb.

Ann. Mag. Nat. Hist., xix, ser. 8, 1917, 54.

This genus contains three species at present, one of which, the genotype, occurs in northern Australia. The mesopleura is largely haired and the hind tibia has an elongate sensory area as in *Chloropisca*; the lack of a defined frontal triangle is distinctive. There are several structural characters, such as the bristly-haired mid tibia and the flattened disc of the mesonotum, distinguishing the male from the female in the Australian species that do not occur in the other species.

PEMPHIGONOTUS MIRABILIS Lamb.

Ann. Mag. Nat. Hist., xix, ser. 8, 1917, 55.

A large, robust, brownish-yellow species, with unicolorous legs, and the wings brown, paler on hind margin, darkest in the male. Length, 5-6.5 mm.

Type locality, Melville Is. I have before me one paratype and some specimens from Darwin, N.T. (Handschin).

FORMOSINA Becker.

Ann. Mus. Nat. Hung., ix, 1911, 78.

The highly convex thoracic dorsum, large frontal triangle, that extends to the anterior margin, and the location of the scutellar bristles on the lower edge of the scutellum distinguish this genus from *Chloropisca* and *Pseudoformosina*.

FORMOSINA AUSTRALIS Becker.

Ann. Mus. Nat. Hung., ix, 1911, 80.

Mesonotum entirely smooth, unpunctured, bare, pleura and mesonotum entirely shiny black, without yellow spot, frons black, scutellum black with yellow tip, abdomen and legs black, metatarsi whitish-yellow. A robust species. Halteres yellow. Frons narrower than one eye, with narrow shiny-black triangle that has on apical half a shallow sulcus and a furrow on either side. Antennae red, with fine bare arista.

Cooktown, Queensland.

This species is unknown to me and the above abridged description is taken from Becker's work on the family in the Indo-Australian Region.

There are about a dozen species of this genus known, all, with the exception of *australis*, being from the Malayan and Oriental regions with some extending the range into southern India. It is more than probable that other species will be met with in northern Australia.

I take this opportunity to erect a new genus, *Pseudoformosina*, for the reception of a species that has heretofore been erroneously placed generically.

PSEUDIFORMOSINA, n. gen.

I am erecting this genus for the reception of *Chlorops nicobarensis* Schiner.³ It has a distinct sensory area on the hind tibia as in *Formosina*, and the genotype has a large pale yellow mark on each notopleural region as in most species of that genus, though this feature is lacking in *F. australis* Becker. It differs from *Formosina* in having the frontal triangle not more than two-thirds as long as frons, instead of attaining the anterior margin, the genae higher than width of third antennal segment and about one-third as high as eye, not almost linear, and in being more normal in form, more like typical species of *Oscinis*, with the mesonotum moderately convex and not prominently so. The pair of apical bristles on the scutellum are situated close to the upper edge, and not as in *Formosina* on the lower edge.

PSEUDIFORMOSINA NICOBARENSIS (Schiner).

A black, slightly shiny species, with head yellow, occiput black, frontal triangle glossy, generally more or less browned and smooth, the frons less shiny and with sparse pale forward-directed hairs. Third antennal segment about 1.5 times as long as wide, pale brown, broadly rounded at apex, aristae brown at base, yellow beyond, subnude, about 1.5 times as long as third antennal segment. Eyes almost round, bare. Ocellars proclinate and divergent, verticals fine; all bristles pale.

Thorax with slight grey-dusting, most distinct on the yellow lateral marks and on posterior part of mesopleura. Scutellum yellow, with a black mark below each basal angle, the hairs and bristles yellow, the apical bristles very closely placed. Legs black, rather stout, mid tibia without erect posterior hairs, all knees, mid tibiae, and tarsi, brownish-yellow, hind tarsi brown. Wings brownish hyaline, suffused with brown from base to apex as far back as anterior third of first

³ Schiner, *Novara Reise*, ii, 1868, 244. [Becker's citation is "Novara Reise, 244.37.(1868)", in *Ann. Mus. Nat. Hung.*, ix, 1911, 35. This has been frequently quoted by later authors. As cited by Becker it refers to page 244, species no. 37.—Ed.]

posterior cell apically, and over fifth vein to apex of discal cell. Abdomen shiny brownish-black, apex of fifth tergite yellow, hairs fine, yellow. Halteres cream-coloured. Length, 3 mm.

This species ranges from the Malayan Region to New Guinea and probably occurs in northern Australia. The above description was made from Philippine specimens.
